# ThinkPad® W520 4270 (Optimus) - TopSeller



| Type-model | Processor | Memory | Wide-screen display | Discrete graphics | Camera | Disk SATA GB[8] rpm | PCIe Mini Card WLAN | PCIe Mini Card WWAN/mSATA | Finger print reader | Blue-tooth | Color calib | Bat-tery cells | Intel vPro | Preload |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4270-26U | i7-2620M | 4GBx1 | 15.6" HD | 1000M | 720p | 500G 7200 | Intel 6205[28] | WWAN upg | None | Blue | None | ***9*** | vPro | Pro 64 |

- ***This small and medium business (SMB) model is part of the US TopSeller™ Program***
- ***Power-packed engineering with Open GL graphics and ISV certifications***
- ***This system is Microsoft® Office 2010 Product Key Ready (O10PKR)***

| | |
|---|---|
| Positioning | *Mobile workstation; two spindles* |
| Processor | **Intel® Core™ i7-2620M processor (dual-core, 2.70GHz, 4MB Cache),** DDR3 memory controller (up to 1333MHz), Intel Turbo Boost 2.0 (3.40GHz), HT technology |
| Memory | *dual-core model:* 8GB max[7], two 204-pin SO-DIMM sockets<br>*quad-core model:* 16GB max, four 204-pin SO-DIMM sockets<br>*All:* PC3-10600 1333MHz DDR3, non-parity, dual-channel capable |
| Optical | DVD burner, 12.7mm Ultrabay Enhanced, removable |
| Ultrabay | One bay for removable devices, Ultrabay Slim-compatible, 12.7mm high, bottom access |
| SATA disk | *Some:* Solid State Drive (SSD) / SATA 3.0Gb/s, 2.5" wide, 7mm high<br>*Some:* HDD / SATA 3.0Gb/s, 2.5" wide, 7mm or 9.5mm high, Active Protection System™<br>*All:* removable, upgradable, supports the second disk, Shock Mounted Hard Drive |
| mSATA™ SSD | None |
| Widescreen display | **15.6"** (396mm) **HD (1366x768) color**, anti-glare, LED backlight, 220 nits, 16:9 aspect ratio, 500:1 contrast ratio, 60% Gamut |
| Color calibration | None |
| Camera | HD720p resolution, wider view angle, low light sensitive, fixed focus |
| Graphics | NVIDIA® Optimus™ technology, auto-switch between discrete and integrated graphics,<br>**Intel HD Graphics 3000** in processor, and<br>**NVIDIA Quadro® 1000M** or **2000M**, PCI Express® x16, **2GB** memory,<br>external analog monitor support via VGA DB-15 connector and<br>digital monitor support via DisplayPort (supports single-link DVI-D via cable 45J7915);<br>supports three independent displays;<br>*Maximum external resolution:* 2560x1600 (DisplayPort)@60Hz;<br>2048x1536 (VGA)@85Hz; 1920x1200@60Hz (single-link DVI-D via cable 45J7915) |
| Keyboard | 7 row, 89-key, ThinkVantage button, spill-resistant, multimedia Fn keys |
| TrackPoint® | TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass |
| Touchpad | UltraNav™, wide touchpad below keyboard, Tap Zones, scrolling regions label, multi-touch |
| ThinkLight™ | Illuminates the keyboard to improve visibility in low-light conditions |
| Dimensions (WxDxH)[3] | *HD & HD+:* 14.68" x 9.65" x 1.25-1.40"; 372.8mm x 245.1mm x 31.8-35.6mm<br>*FHD:* 14.68" x 9.65" x 1.29-1.44"; 372.8mm x 245.1mm x 32.8-36.6mm |
| Weight[2] | *6-cell:* starting at 5.40 lb (2.45kg); *9-cell:* starting at 5.75 lb (2.61kg) |
| Case material | *Display cover:* Carbon-fiber / Glass-fiber hybrid;<br>*Bottom:* Glass-fiber reinforced plastic without paint |
| Battery - type | Lithium Ion 6-cell or 9-cell, supports optional Slice battery (57Y4545) as 2nd battery at bottom |
| Battery - life[10] | *6-cell:* up to 6.5 hr; *9-cell:* up to 10.8 hr; *9-cell plus slice battery:* up to 21.6 hr |
| Chipset | **Mobile Intel QM67 Express Chipset** |
| ExpressCard | One slot (ExpressCard/34) |
| Smart Card Read | None |
| Multicard Reader | 4-in-1 reader (MMC, SD, SDHC, SDXC) |
| Ports | Two USB 3.0 (blue), one Powered USB 2.0 (yellow), one USB 2.0/eSATA combo port, external monitor (VGA DB-15, DisplayPort), ethernet (RJ-45), IEEE 1394 FireWire 400 (4-pin connector; 1394a-2000 standard) |
| PCIe Mini Card | Two PCI Express Mini Card slots |
| WLAN[4] | 11a/b/g/n, PCIe Half Mini Card, Intel Centrino® Advanced-N 6205, 2x2 |
| WWAN | Wireless WAN upgradable |
| Modem | 56K V.92[6] modem |
| Bluetooth™ | Bluetooth 3.0 wireless, LED indicator |
| Ethernet | *Non-vPro model:* Intel 82579LF Gigabit Network Connection (Lewisville), PHY, PCIe x1<br>*vPro model:* Intel 82579LM Gigabit Network Connection (Lewisville), PHY, PCIe x1 |
| Intel AMT | Intel Active Management Technology (iAMT) |
| Audio support | High Definition (HD) Audio, Conexant 20672 codec / stereo speakers, 1 watt x 2 / volume up, down, mute buttons / dual array mic, mic mute button, combo audio/mic jack |
| Security | Power-on password, hard disk password, supervisor password, security keyhole |
| Security chip | Trusted Platform Module, TCG 1.2-compliant |
| Fingerprint reader | None |
| Limited warranty[12] | **1-year** - depot repair service / service upgrades[22] available |

**Preloaded operating system**[20]
- Genuine Windows® 7 Professional 64

**Ready to install applications**[14] (all OSes; only some listed)
- Rescue and Recovery™
- Access Connections™
- Fingerprint Software (fingerprint models)
- Password Manager (fingerprint models)
- ThinkVantage System Update
- ThinkVantage Power Manager
- ThinkVantage Toolbox

**Preloaded applications**[14] (all OSes; only some listed)
- Norton™ Internet Security 2011 (30 days of virus definitions)
- Adobe® Reader®
- Skype™ for Windows
- Windows Live™ Essentials
- Microsoft Office 2010 preloaded; purchase product key to activate
- Corel® WinDVD® (DVD±RW)
- Corel Burn.Now™ Lenovo Edition (DVD±RW)
- Corel DVD MovieFactory® Lenovo Edition (DVD±RW)
- huey™PRO Monitor Color Correction by Pantone®/X-Rite® (color calibration models)

Supports ThinkVantage® technologies

170-watt AC adapter
ThinkPad Roll Cage (one-piece magnesium frame)
EPEAT™ Gold rating
ENERGY STAR® 5.0-compliant
RoHS-compliant
International Warranty Service[17]
24 hour x 7 day[18] toll-free support during the warranty period[12] via 800-426-7378

For compatible accessories, please go to O-W520 sheet;

For ThinkPlus™, [22] service upgrade options, please go to S-TA sheet

See footnotes for more detailed information
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